RESPIRATORY SYSTEM

Specific Expectation

E1.2 analyse the impact of various lifestyle choices on human health and body systems

E2.1 use appropriate terminology related to animal anatomy, including, but not limited to: *systolic contraction, diastolic pressure, diffusion gradient, inhalation, exhalation, coronary, cardiac, ulcer, asthma,* and *constipation* [C]

E3.2 describe the anatomy and physiology of the respiratory system (including the nasal cavity, trachea, larynx, bronchi, bronchioles, alveoli, and oxygenated and deoxygenated blood) and the mechanisms of gas exchange and respiration

E3.4 explain some of the mechanisms of interaction between a mammal’s different body systems (e.g., the exchange of oxygen and carbon dioxide between the respiratory and circulatory systems)

**Learning Goals, students will be able to...**

* List and define the different structures in the respiratory system and their specialized function.
* Contrast and compare aerobic and anaerobic cellular respiration.
* Discuss various respiratory disorders including structures involved, functions and implications of a dysfunction of the structure on the overall health of an individual.

**Glossary**

|  |  |
| --- | --- |
| TERM | DEFINITION |
| Respiration | all processes involved in the exchange of oxygen and carbon dioxide between cells and the environment |
| Endotherm | an organism that maintains a near-constant body temperature. All birds and mammals are endotherms. |
| inspiration | the action of breathing in, or inhaling, air |
| expiration | the action of breathing out, or exhaling, air |
| breathing volume | Volume of air that fills the lung , measured as a normal or maximum lung volume |
| spirometer | Instrument that measures lung volume |
| VO2max | an estimate of the maximum amount of oxygen (in millilitres) that a person can use in one minute per kilogram of weight while breathing air at sea level. |
| breathing rates | Measurement of the amount of breaths /minute |

|  |  |
| --- | --- |
| STRUCTURES | DESCRIPTION |
| trachea |  |
| epiglottis |  |
| larynx |  |
| bronchus/ bronchi |  |
| bronchiole |  |
| alveolus/alveoli |  |
| diaphragm |  |

**ASSESSMENT EVIDENCE**/EVALUATIONS:

* LAB
* JIGSAW (Expert group)
* QUIZ
* UNIT TEST

LEARNING PLAN:

* PowerPoint

ACTIVITIES:

Pre-assessment quiz- peer- assessed

1. HOOK: you tube video/ song
2. LAB: Build a lung Model
3. LAB: Lung Volume and the effect of exercise
4. LAB: listen to lung sounds (online site)
5. LAB: Spread of Disease (Virus)
6. smartboard activity: label Structures
7. Consolidation: